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BLACKEYE

MIR Hyperspectral Imaging Camera (2900 – 4200 nm)

The **BlackEye** is a linescan (pushbroom) hyperspectral imaging camera in the mid-infrared spectral range that allows the acquisition of real-time data with high spectral and spatial resolution.

This high-sensitivity and ultra-fast camera is an excellent solution even for the most challenging chemical imaging applications in laboratories and industrial manufacturing, for example, black plastic or mineral identification and sorting.

Combining superior optical design with advanced reflection grating technology, a fast cryo-cooled InSb detector and high-end electronics, the **BlackEye** camera provides an exceptional performance even under harsh environmental conditions.

By choosing various camera lenses (fore optics), the **BlackEye** can be easily adapted to a wide range of applications, ensuring optimal image quality and size.

Features:

● **Superior sensitivity and stability**

● **High frame rate**

● **Outstanding imaging performance**

● **Robust design without moving parts**

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Technical Specifications:

BlackEye

Spectrograph

Spectral range	typ. 2900 to 4200 nm
Dispersion	171 nm/mm
Spectral resolution	< 18 nm (with 80 µm slit)
Spatial resolution	rms spot radius < 40 µm
Smile	< 180 µm
Keystone	< 35 µm
F-number	4
Slit width, default	80 µm (others on request)

Electronics

Sensor	InSb
Pixels in full frame	320 x 256
Pixel size	30 x 30 µm
Bit depth	14 bit
Frame rate	383 Hz @ integration time < 2.6 ms
Data interface	Gigabit Ethernet /CamLink
Power consumption	< 50W
Power supply	12 V / 5 A DC
Cooling	Stirling cooling, MTBF 8000 h

Operating Conditions

Temperature (operating)	- 5 °C to + 40 °C
Temperature (storage)	-10 °C to + 50 °C

Mechanics

Dimensions l x w x h	436 x 184 x 258 mm
Weight	7 kg
Lens mount	Bayonet

Please note that any specs on the data sheet are subject to change without notice.

As a well-established manufacturer of spectroscopic measurement equipment, **inno-spec** provides optimized solutions for any individual applications: from customized OEM components for system suppliers up to fully integrated turnkey solutions for the end-user.

Accessories:

- Dedicated lighting solutions

- Various mounting accessories

- Different fore optics: 7 mm, 13 mm, 25 mm, 50 mm, 100 mm

- Conveyor belt or stepper table available

- Several software packages can be provided

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